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## ABSTRACT OF THE DISCLOSURE

A plastic optical fiber with a lens of the present invention includes a plastic optical fiber including a core and a cladding, and a lens having a function of controlling light rays. The lens is formed of a material with a thermally-softening temperature higher than a thermally-softening temperature of the core of the plastic optical fiber, and the lens is integrated with the plastic optical fiber by heating and pressing the lens against an end face of the plastic optical fiber.